36816

SUPERFUND PROPOSED PLAN

Asbestos Dump Site
Passaic Township, New Jersey

USEPA - REGION II **July 1991**

PURPOSE OF PROPOSED PLAN

This Proposed Plan describes the preferred option for addressing soils contaminated with asbestos at the Asbestos Dump Site. The properties comprising the Asbestos Dump site are located in Meyersville, Passaic Township, Morris County, New Jersey. This document is issued by the United States Environmental Protection Agency (EPA), the lead agency for site activities, and the New Jersey Department of Environmental Protection (NJDEP), the support agency. EPA, in consultation with NJDEP, will select a final remedy for the sites only after the public comment period has ended and the information submitted during this time has been reviewed and considered. This Proposed Plan outlines the remedial alternatives evaluated for addressing contaminated soils and provides the rationale used to determine EPA's preferred alternative.

EPA is issuing this Proposed Plan as part of its public participation responsibilities under Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA). This Proposed Plan summarizes information that can be found in greater detail in the focused Remedial Investigation (RI) and Feasibility Study (FS) Reports and other documents contained in the Administrative Record for this site.

DATES TO MARK YOUR CALENDAR

July 08 - Aug. 07, 1991: Public comment period on proposed remedial alternatives.
July 17, 1991: Public meeting at Passaic Township Hall.

EPA and NJDEP encourage the public to review these and other documents in the Administrative Record in order to gain a more comprehensive understanding of the site and the Superfund activities that have been conducted there. The Administrative Record contains the information upon which the selection of the response action will be based. The administrative record will be available in a repository at the following locations:

Passaic Township Free Public Library
91 Central Avenue
Sterling, N.J. 07980
(908) 647-2088
Hours: Mon - Thurs: 10:00am - 9:00pm
Fri: 10:00am - 5:00pm
Sat: 10:00am - 2:00pm
Sun: 1:00pm - 5:00pm (Sept. - June)
and can also be found at:

U.S. EPA - Region II
26 Federal Plaza
New York, New York 10278
(212) 264 - 7371
Hours: Mon - Fri: 9:00am - 5:00pm

COMMUNITY ROLE IN THE SELECTION PROCESS:

EPA and NJDEP rely on public input to ensure that the remedy selected for each Superfund site is fully understood and that the agencies have considered the concerns of the local community, as well as ensuring that the selected remedy provides an effective solution.

EPA has set a public comment period from July 08, 1991 to Aug. 07, 1991 to encourage public participation in the selection process. The comment period includes a public meeting during which EPA will discuss the focused RI/FS reports, the Proposed Plan, answer questions, and accept both oral and written comments. The public meeting is scheduled for July 17, 1991 and will be held at the Passaic Township Free Library, 91 Central Avenue, Sterling, New Jersey at 7:00 pm.

Comments will be summarized and responses provided in the Responsiveness Summary section of the Record of Decision (ROD). The ROD is the document that presents EPA's final selection of a response action. Written comments on this Proposed Plan should be addressed to:

Pamela J. Baxter, Project Manager
U.S. Environmental Protection Agency
Region II - Room 13-100
26 Federal Plaza
New York, New York 10278

SITE BACKGROUND:

The Asbestos Dump Site is a National Priorities List (NPL) Site which includes four separate properties in southeastern Morris County, New Jersey. The four properties comprising the site are referred to as the Millington Site, the New Vernon Road Site, the White Bridge Road Site, and the Dietzman Tract. The Asbestos Dump Project is divided into three operable units. A Record of Decision (ROD) for the first operable unit, the Millington Site, was signed on September 30, 1988. The properties of the second operable unit are the New Vernon Road and White Bridge Road Sites, and are the subject of this Proposed Plan. The Dietzman Tract is the third operable unit; the contamination at this site is currently being investigated.

The New Vernon Road and White Bridge Road Sites are both residential properties. In addition, the residents of both properties operate businesses on-site. Similar types of asbestos contamination have been detected at the two sites. At both, the potential for human exposure to airborne asbestos exists. Based on these facts, it was deemed appropriate to expedite the remediation of these sites as one operable unit through a focused Remedial Investigation and Feasibility Study.

On September 21, 1990, the Agency for Toxic Substances and Disease Registry (ATSDR) issued a health consultation that concluded that the sites pose an imminent and substantial health and safety threat to nearby residents and workers. A Public Health Advisory was later issued on December 20, 1990, which recommended, among other things, that affected residents be dissociated from exposure to site-related asbestos.

The New Vernon Road Site

The New Vernon Road property consists of approximately 30 acres of land located at 237 and 257 New Vernon Road in Meyersville, New Jersey. The property is bounded by New Vernon Road to the west, a portion of the Great Swamp National Wildlife Refuge to the north, and tracts of wooded and wetland areas to the east and south. One residence is located on the site. The owners of this residence also operate a business on-site in a separate building. In addition, an unoccupied dwelling, owned by the site residents, is located on the site (see Figure 1). One private residence is located directly south of the New Vernon Road property and another residence is located southwest of the property, to the south of a tennis club, both of which are located on the opposite side of New Vernon Road.

New Vernon Road Site Location Map

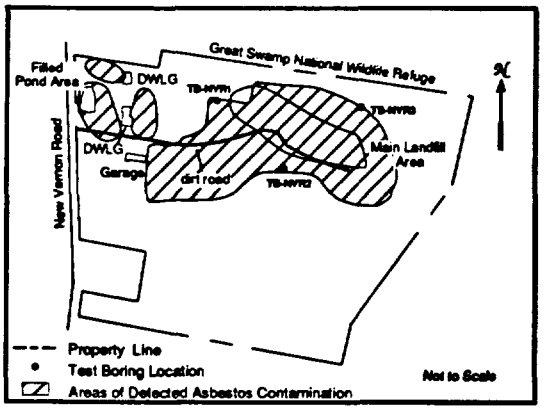

Figure 1

From 1945 through 1980, the New Vernon Road property was used for farming (e.g., corn and dairy cattle). From 1968 to 1971, asbestos containing material (ACM) from the National Gypsum Company was disposed of on the site. The ACM included asbestos fibers, broken asbestos tiles, and siding, that was deposited throughout the site. Large amounts of ACM were deposited in the central portion of the property in a large depression. However, asbestos has been detected in other areas of the property.

In August 1990, EPA collected and analyzed soil and dust samples at the New Vernon Road site. Due to high levels of asbestos, EPA determined that an immediate removal action was necessary to address the imminent threat posed by the site.

Removal activities were conducted in the fall of 1990 and included: erecting signs and fencing to restrict access to areas of visible surface contamination; air and soil sampling for asbestos; capping two driveways on-site with asphalt to cover asbestos; covering other areas of visible asbestos contamination with geotextile fabric; removing ACM from a dilapidated shed located next to the driveway and demolishing the shed; decontaminating the primary residence on-site; collecting and analyzing air samples from the residence to confirm decontamination; and, visually inspecting the lawn area and removing ACM located on the ground surface for off-site disposal.

The White Bridge Road Site

The White Bridge Road Site consists of approximately 12 acres of land at 651 White Bridge Road as well as adjoining property, which is part of the Great Swamp National Wildlife Refuge, in Meyersville, New Jersey. This site is bounded by White Bridge Road to the north, the Great Swamp National Wildlife Refuge to the east and southeast, Black Brook to the southwest and a vacant wooded lot to the west. One private residence is located on the site. Five private residences are located approximately 700 feet north and west of the property. (see Figure 2)

White Bridge Road Site Location Map

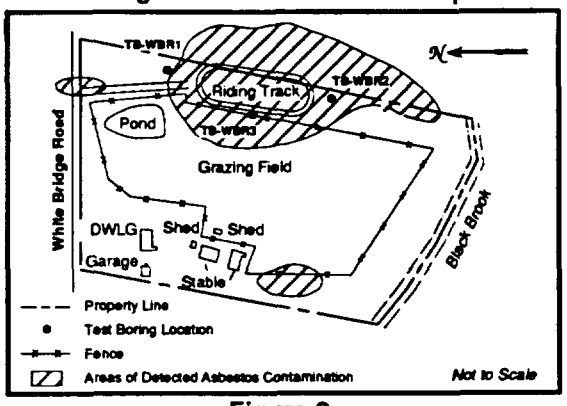

Figure 2

An asphalt paved driveway located in the northwest portion of the property maintains access to a two story dwelling, garage, two sheds and three stables. A pond, approximately 100 feet in diameter, is located east of these structures. A horse riding track is situated in the east-central portion of the property and is comprised of large amounts of ACM. This track is approximately 31,250 square feet and is located approximately 350 feet from the house and horse stables. The property also includes a large grazing field, which is located west of the horse riding track and wetland areas.

From 1945 through 1969, the White Bridge Road property was used for farming. From 1970 to 1975, ACM generated by National Gypsum was disposed of on the property. Most of the ACM is located in the area of the riding track. However, asbestos has also been detected in other areas of the site.

In August 1990, EPA collected and analyzed soil and dust samples at the White Bridge Road site. Due to high levels of detected asbestos, an immediate removal action was initiated to address the imminent threat posed by the site.

Removal activities were performed throughout the fall of 1990 and included: erecting signs and temporary fencing to restrict access to areas with visible asbestos contamination; and, covering areas of visible asbestos contamination, including the riding track, with geotextile fabric to restrict access and to reduce the potential for airborne releases.

SCOPE AND ROLE OF ACTION:

EPA's Focused Remedial Investigation and Feasibility Study Reports are available for public review in the Information Repositories listed previously.

As stated above, the Asbestos Dump Site will be addressed in three separate Operable Units. The preferred remedy presented in this Proposed Plan addresses the New Vernon Road and White Bridge Road sites which comprise Operable Unit 2. The preferred remedy addresses asbestos contamination at the sites.

SITE CHARACTERIZATION:

In 1985, EPA issued an Order to National Gypsum requiring the performance of an RI/FS at the four Asbestos Dump subsites. EPA performed oversight of these activities. In May 1987, National Gypsum submitted a Remedial Investigation Report to document the findings of the RI. Upon review of this document, EPA determined that the RI Report failed to adequately characterize the nature and extent of contamination at the New Vernon Road, White Bridge Road and Deitzman Tract subsites.

In the fall of 1990, EPA performed removal actions at the New Vernon Road and White Bridge Road Sites. The removal activities performed at each site are described above. These activities served to stabilize and temporarily reduce the risks to site residents and others, posed by exposure to airborne asbestos.

During the fall of 1990, concurrent with the removal action, EPA initiated a focused remedial investigation. This RI included extensive soil and air sampling at the sites. In order to characterize site contamination, the RI soil sampling was performed prior to the placement of cover materials over areas of asbestos contamination.

The data collected during the RI has characterized the nature and extent of asbestos contamination at the site and serves as a basis for the preferred alternative presented in the Proposed Plan for a final remedy at the site. The final remedy will be documented in a subsequent Record of Decision, after consideration of all comments received during the public comment period.

The characterization of the nature and extent of asbestos at the New Vernon Road and White Bridge Road properties is based on the analysis of samples taken from the surface, subsurface, ground water, surface water, sediment and air samples.

Three ground water wells were installed and sampled at each site as part of the RI performed by National Gypsum in 1986. These wells were sampled for asbestos, volatile organics, base neutrals, phenols, pesticides and metals. Sampling results indicated no significant ground water contamination by any of the above constituents at either of the two properties. However, data quality concerns necessitate additional sampling during the remedial design phase, to confirm the findings.

Surface water and sediment samples were collected and analyzed at each site in 1986 as part of National Gypsum's RI activities. Two surface water and two sediment samples were collected from a drainage ditch at the New Vernon Road Site. Three surface water and

three sediment samples were collected from Black Brook on the White Bridge Road Site. These samples were analyzed for asbestos, volatile organics, base neutrals, phenols, pesticides and metals. Although some organic compounds were detected, laboratory contamination limits the use of this data for site characterization. Therefore, confirmatory sampling will be performed. Low levels of asbestos, below the health based Maximum Contaminant Level, were detected in surface water samples. No asbestos was detected in sediment samples.

Extensive soil sampling was performed at the sites in the fall of 1990 to characterize all surface and subsurface areas of asbestos contamination. Activities included: development of a grid pattern on each site; soil sampling based on the grid pattern throughout the site; analysis of all soil samples for asbestos content; and geophysical subsurface investigations. Sampling techniques used at the site included analysis for asbestos by the transmission electron microscopy (TEM) method. This is the most sensitive currently available technique for analyzing asbestos. The detection limit for asbestos with the TEM method is 0.5%.

A total of 321 soil samples (188 samples from the New Vernon Road property and 133 samples from the White Bridge Road property) were collected and subsequently analyzed. Of these 321 samples, 28 samples contained asbestos concentrations above method detection limits.

At the New Vernon Road Site, asbestos contamination was primarily detected in the area of the residence in the north-western portion of the property and a large landfill area in the north-central portion of the property (see Figure 1). The total estimated surface area of detected asbestos contamination is 95,100 square feet. Asbestos is present on-site at depths ranging from 0 to 8 feet. The estimated volume of asbestos contaminated material is 15,800 cubic yards. Since the ground water at this site is relatively shallow, approximately one to five feet below the surface, some of the ACM is located beneath the water table.

At the White Bridge Road Site, the majority of asbestos contamination in soils is located on and around the horse riding track in the east-central portion of the property (see Figure 2). The total estimated surface area of detected asbestos contamination is 85,600 square feet. The depth of asbestos present on site ranges from 0 to 10 feet. The estimated volume of asbestos contaminated material is 21,300 cubic yards. Since the ground water at this site is relatively shallow, approximately one to six feet below the surface, some of the ACM is located beneath the water table.

SUMMARY OF SITE RISKS:

EPA conducted a baseline Risk Assessment to evaluate the potential risks associated with current and future conditions at the sites. The baseline risk assessment estimates health risks which could result from contamination at the sites if no remedial action is taken.

Asbestos is the contaminant of concern at the sites. Asbestos has been given an "A" classification, by EPA's Carcinogenic Risk Assessment Verification Endeavor, denoting a human carcinogen. The basis for this classification is the observation of increased mortality and incidence of lung cancer, mesotheliomas and gastrointestinal cancer in occupationally exposed workers across study populations. Due to the lack of toxicity data, only carcinogenic risks posed by asbestos were evaluated in the Risk Assessment.

The exposure pathways evaluated in this assessment represent the major current land-use as well as future land-use exposure pathways. The inhalation of asbestos in the air was evaluated for adult on-site residents. Current and future land-use scenarios are residential for both sites. This Risk Assessment was based on the use of maximum concentrations of airborne asbestos detected during RI activities at the New Vernon Road and White Bridge Road Sites.

EPA considers excess upper bound individual lifetime cancer risks of between 10^{-4} to 10^{-6} to be acceptable. This range suggests that an individual has not greater than a one in ten

thousand to one in a million chance of developing cancer as a result of exposure to site conditions.

The cumulative upper bound risks associated with potential exposures to maximum asbestos concentrations in air at the New Vernon Road and White Bridge Road Sites are 1×10^{-2} (one in a hundred) and 3×10^{-3} (three in a thousand), respectively. These upper bound risks are significantly greater than the acceptable EPA risk range.

The limitations of asbestos analytical techniques currently available make establishing a health based cleanup level difficult. A cleanup level of 0.5% asbestos, as detected by the TEM method. Remediation of asbestos contaminated materials to the cleanup level of 0.5% asbestos is expected to significantly reduce risks posed by airborne asbestos.

Actual or threatened release of hazardous substances from this site, if not addressed by the preferred alternative or one of the other active measures considered, may present a current or potential threat to public health, welfare, or the environment.

SUMMARY OF ALTERNATIVES:

CERCLA requires that each site remedy selected must be protective of human health and the environment, cost-effective, and use permanent solutions and treatment technologies to the maximum extent practicable.

Based on the data collected during the RI, a range of alternatives was developed to address asbestos contamination at the site. A wide range of technologies were screened for incorporation into one or more of the alternatives developed. These alternatives are presented in the focused FS Report. The numbers assigned to the alternatives in the following discussion match those in the FS Report.

The remedial alternatives for the New Vernon Road and White Bridge Road Sites that have been selected for detailed evaluation are the following:

Alternatives:

1) No Action
2) Native Soil/Vegetative Cap
3) ACM Excavation with Off-Site Vitrification
4) In-Situ Stabilization/Solidification
5) ACM Excavation and Off-Site Landfill

All alternatives except the No Action Alternative include the following work elements: mobilization/site preparation, run-on/run-off controls, air monitoring, ground water monitoring, equipment decontamination, grading and vegetation.

Note that the time required to implement each alternative presented below starts after the completion of remedial design activities.

Alternative 1:

NO ACTION

Capital Cost:	**$0**
Annual Operations and Maintenance (O & M) Cost:	**$0**
Present Worth Cost:	**$0**
Time to Implement:	**NA**

The No Action Alternative, although not protective of human health and the environment, is analyzed for purposes of comparison with other alternatives, as required by the NCP and current guidance. This alternative would leave both sites in their present condition, with no remedial effort implemented. Access to both properties is currently not restricted. No measures to mitigate asbestos migration or reduce contaminant concentrations would be taken. The selected cleanup level for ACM of 0.5% asbestos would not be attained under the No Action alternative.

Alternative 2:

Native Soil/Vegetative Cap

Capital Cost:	**$1,200,000**
Annual O & M Cost:	**$210,000**
Present Worth Cost:	**$1,700,000**
Time to Implement:	**6 months**

Capping the ACM on the sites would prevent direct contact with contaminants at or near surface grade, and would minimize the continued migration of asbestos into the air. The caps would be constructed of approximately two feet of topsoil from an off-site source. The caps would be seeded with vegetation to minimize erosion.

The caps would be maintained to ensure continued performance. Inspection of the caps would be performed on a monthly basis, and occasional mowing would be necessary to preclude the establishment of deep-rooted vegetation which could compromise cap integrity. Berms would be constructed and maintained to manage run-on and run-off from the capped areas. Inspection and maintenance of the caps would be conducted for a minimum of 30 years.

Institutional controls regarding future construction and other activities on the sites would be necessary to ensure the performance of the caps.

Alternative 3:

ACM Excavation and Off-Site Vitrification

Capital Cost:	**$20,100,000**
Annual O & M Cost:	**$43,000**
Present Worth Cost:	**$24,700,000**
Time to Implement:	**7 months**

This alternative calls for the excavation of all ACM detected above the cleanup level at the sites. Excavation activities would be conducted using proper dust suppression controls and containerization of wastes. In addition, it may be necessary to erect a temporary structure to enclose areas undergoing excavation to control airborne asbestos. ACM would be placed in roll-off containers following excavation. The containers would be sealed with plastic sheeting to ensure containment of ACM. Containerized ACM would be transported approximately 250 miles to an off-site vitrification facility.

To implement this alternative, it would be necessary to construct ground water collection trenches upgradient of the excavation areas on both sites. The trenches would divert ground water flow around the excavation areas to allow dewatering of ACM, some of which is located below the water table.

In the vitrification process, ACM is electronically heated in a glass-making furnace. A mixture of the ACM and waste glass are fed into the unit and heated to approximately 2,600 ^{o}F. Asbestos is thermally decomposed and rendered non-toxic by the vitrification process. Following vitrification, the fragmented, glass-like material could be used in several applications, including road surfacing. After excavation, the sites would be backfilled with clean soil and graded.

Alternative 4:

In-Situ Stabilization/Solidification

Direct Capital Cost:	**$4,700,000**
Annual O & M Cost:	**$43,400**
Present Worth Cost:	**$5,700,000**
Time to Implement:	**10 months**

Through this alternative, ACM would be treated in-situ (in place) using a cement-based stabilization/solidification process. This alternative would limit the mobility of ACM by binding it in an insoluble matrix. All ACM above the cleanup level of 0.5% asbestos would be treated. Approximately 21,300 cubic yards of ACM at the White Bridge Road site and 15,800 cubic yards of ACM at the New Vernon Road site would be treated in-situ.

The stabilization/solidification technology consists of a batch mixing plant that supplies a slurry feed of cement and proprietary chemicals, and a soil mixing system which delivers the slurry feed and mixes it with the waste materials in-situ. The treated material would exhibit a volume increase of approximately 10%. In addition, after solidification, the sites would be appropriately graded and soil placed over the solidified material.

Alternative 5:

ACM Excavation and Off-Site Landfill Disposal

Direct Capital Cost:	**$12,900,000**
Annual O & M Cost:	**$43,000**
Present Worth Cost:	**$16,000,000**
Time to Implement:	**8 months**

The components of this alternative which relate to excavation procedures are the same as those described in Alternative 3. The major difference between Alternative 3 and Alternative 5 is the fate of the excavated ACM. In Alternative 5, all ACM detected above the cleanup level would be transported and disposed of in an approved landfill. After excavation, the sites would be backfilled with clean soil.

EVALUATION CRITERIA:

This section describes the requirements of CERCLA in the remedy selection process. Remedial treatment alternatives are evaluated using the following nine criteria:

Overall Protection of Human Health and the Environment: This criterion addresses whether or not a remedy provides adequate protection and describes how risks posed through each pathway are eliminated, reduced or controlled through treatment, engineering controls or institutional controls.

Compliance with ARARs: This criterion addresses whether or not a remedy will meet all of the applicable or relevant and appropriate requirements (ARARs) of Federal and State environmental statutes (other than CERCLA) and/or provide grounds for invoking a waiver.

Long-term Effectiveness: This criterion refers to the magnitude of residual risk and the ability of a remedy to maintain reliable protection of human health and the environment over time, once cleanup goals have been met.

Reduction of Toxicity, Mobility or Volume: This criterion addresses the degree to which a remedy utilizes treatment to reduce the toxicity, mobility, or volume of contaminants at the site.

Short-Term Effectiveness: This criterion refers to the time in which the remedy achieves protection, as well as the remedy's potential to create adverse impacts on human health and the environment that may result during the construction and implementation period.

Implementability: Implementability is the technical and administrative feasibility of a remedy, including the availability of materials and services needed to implement the selected alternative.

Cost: Cost includes capital and operation and maintenance costs.

State Acceptance: This criterion indicates whether, based on its review of the focused RI/FS and the Proposed Plan, the State concurs with, opposes, or has no comment on the preferred alternative. This criterion will be addressed when State comments on the Proposed Plan are received.

Community Acceptance: This criterion will be assessed in the Responsiveness Summary section of the Record of Decision following a review of the public comments received on the focused RI/FS reports and the Proposed Plan.

COMPARATIVE ANALYSIS OF ALTERNATIVES:

This section provides a summary of the evaluation of each alternative against the first seven CERCLA criteria described above. The criteria which address state and community acceptance will be evaluated following the public comment period.

1) OVERALL PROTECTION: The No Action alternative would not provide adequate protection of human health by eliminating, reducing, or controlling risks posed by ACM through treatment, engineering controls or institutional controls. Alternatives 3 and 5 would achieve

cleanup levels, but involve ACM excavation, which presents short-term risks due to fugitive dust emissions caused by disturbance of all detected surface and subsurface ACM. Alternative 4, solidification/stabilization, would attain cleanup levels without excavation of waste materials, with some limited short-term risks due to ACM disturbance during implementation. This risk is expected to be significantly less than the risks posed by Alternatives 3 and 5. Alternative 2, capping, does not achieve cleanup levels, but would provide a degree of protection because it would reduce the release of airborne asbestos. Alternative 2 poses less short-term risks than Alternatives 3, 4 and 5 because it involves no disturbance of subsurface ACM.

2) COMPLIANCE WITH ARARS: The sites both contain wetland areas and are located in the 100-year floodplain of the Passaic River Basin. Therefore, federal and state requirements for the protection of wetlands and floodplains are ARARs. In addition, other ARARs that may apply to remediation include the Ambient Water Quality Criteria established pursuant to the Clean Water Act and the National Emission Standards for Hazardous Air Pollutants established under the Clean Air Act. By addressing the source of asbestos contamination at the site, Alternatives 2, 3, 4 and 5 are expected to attain these ARARs.

Alternative 1, No Action, leaves wastes untreated on-site above the cleanup goal. Since the potential exists for asbestos to become airborne, this alternative would not attain ARARs or cleanup goals for the site.

Chemical-specific ARARs for asbestos in soils have not been promulgated. The cleanup level established for the sites is the TEM detection limit of 0.5% asbestos. The two alternatives which include excavation, Alternatives 3 and 5, as well as Alternative 4, solidification/ stabilization, are expected to attain the selected cleanup level of 0.5% asbestos in the long term. However, since these alternatives disrupt subsurface ACM to varying degrees, stringent controls would have to be implemented during remedial activities to assure compliance with ARARs for airborne asbestos concentrations.

Alternative 2, capping, would not achieve the selected cleanup level for asbestos, but could be designed to comply with ARARs which affect construction in wetlands/floodplains.

3) LONG-TERM EFFECTIVENESS AND PERMANENCE: Alternative 1, No Action, does not offer long-term effectiveness or permanence.

Alternatives 3 and 5, excavation with off-site vitrification and landfilling, respectively, would provide the greatest long-term effectiveness and permanence for the sites since ACM is excavated and transported off-site for treatment or disposal. These two alternatives require no residuals management.

Alternative 4, solidification/stabilization, offers a high degree of permanent treatment of ACM on-site. Although the waste remains on-site, it is expected that this remedy would achieve long-term reliable protection by immobilizing the ACM.

Alternative 2, capping, reduces risks posed by airborne asbestos through containment. The degree of permanence achieved would be less than Alternatives 3, 4 and 5, since untreated waste remains on site. In addition, this alternative would require continual maintenance and institutional controls to assure its long-term effectiveness. Furthermore, ACM, through the annual freeze/thaw cycle could migrate through soil to the surface.

4) REDUCTION OF TOXICITY, MOBILITY OR VOLUME: Alternative 1, No Action, provides no reduction in toxicity, mobility or volume of ACM.

Alternative 3, excavation and off-site vitrification, provides the highest degree of long-term reduction of toxicity, mobility and volume by thermally destroying asbestos. However, Alternative 3 along with Alternative 5, excavation with off-site landfilling, provide the greatest potential for increased mobility of asbestos during remediation. Excavation and transportation activities would require extensive controls to minimize mobility of airborne asbestos. While Alternative 5 would reduce the toxicity, mobility and volume of asbestos in the long term at the sites, it does not treat the

asbestos. Therefore, the risks are reduced at the sites, but the toxicity and volume of the asbestos would not be reduced permanently. Controls utilized by the approved landfill would provide a reduction in mobility of the ACM.

Alternative 4, solidification/stabilization, would provide a reduction in ACM mobility through immobilization. This treatment would disturb the subsurface ACM and may increase the mobility of asbestos in the air in the short term. However, the disturbance would be significantly less than that caused by the excavation activities proposed for Alternatives 3 and 5. The toxicity of the asbestos would be significantly reduced since it would be bound in an insoluble matrix and no longer available for uptake in the environment. Treatment by in-situ stabilization/solidification would increase the volume of the initial untreated materials by an estimated 10%.

Alternative 2, capping, would reduce the mobility of ACM through containment. No reduction in ACM toxicity or volume would be obtained through this alternative.

5) SHORT-TERM EFFECTIVENESS: The potential risks posed by the site remain unchanged, and the remedial response objectives would not be achieved for the No Action alternative.

With capping, Alternative 2, risks to remediation workers may occur during cap construction due to surface soil contamination, but potential risks would be significantly lower than the short-term risks posed by Alternatives 3, 4 or 5. Remedial response objectives could potentially be achieved in approximately six months.

Alternatives 3 and 5 would pose the greatest short term risks. These alternatives would pose similar short-term risks due to the common elements of excavation and transportation of large volumes (approximately 37,100 cubic yards) of ACM. The activities would require full disturbance of all surface and subsurface ACM, which would increase the potential for mobility of asbestos in the air. This would increase the short-term respiratory risks at the site. For Alternatives 3 and 5, remedial response objectives would be achieved within seven months, and eight months, respectively.

Alternative 4, in-situ solidification/stabilization would pose some short-term respiratory risks, but risks are more controllable than with Alternatives 3 and 5. Disturbance of surface and subsurface ACM would occur, but to a much lesser degree than excavation. Remedial action objectives would be achieved within 10 months.

6) IMPLEMENTABILITY: Alternative 1, No Action, requires no implementation of remedial measures. While Alternative 2, capping, would be easily implemented since capping construction methods are well developed, the presence of wetlands on the sites would require a high level of maintenance. Erosion and soil movement in a wetlands environment would continually contribute to degradation of the cap.

There would be some difficulties in the implementation of Alternatives 3 and 5 because excavation of ACM must be carefully managed to control short-term risks. In addition, the excavation alternatives would require excavation of waste below the water table. Construction of trenches would be required to control ground water flow during excavation activities. Controlling ground water flow during excavation can be complicated and will add to the difficulty of implementing Alternatives 3 and 5. Further, the off-site vitrification component of Alternative 3 poses other problems in that the availability of the vitrification system is extremely limited as this is a currently developing technology.

Alternative 4, solidification/stabilization, is fairly easily implemented because ACM is handled on-site. This technology has been employed at a number of hazardous waste sites. While a treatability study would be performed to confirm the technology's effectiveness for treating the site specific ACM, limited technical problems are anticipated. The sites would be able to accommodate the volume increase resulting from this treatment. While this alternative is more difficult to implement than Alternative 2, solidification/stabilization is more easily implemented than Alternatives 3 and 5.

7) COST: The No Action alternative is the least costly, but most detrimental to human health and the environment. The estimated present worth cost of each alternative is as follows:

1) No Action	$ 0
2) Soil/Vegetative Cap	$ 1.7 million
3) ACM Excavation and Off-Site Vitrification	$ 24.7 million
4) In-Situ Stabilization/ Solidification	$ 5.7 million
5) ACM Excavation and Off-site Landfill	$ 15.5 million

The costs to implement Alternatives 3 and 5 are much higher than for the other alternatives. The higher short-term risks associated with Alternatives 3 and 5, coupled with the implementability difficulties of Alternative 3 and the lack of treatment associated with Alternative 5, make these two alternatives less cost effective than Alternatives 2 and 4. Alternative 4 is cost effective since it achieves remedial action objectives and a similar degree of protectiveness to the excavation alternatives and costs less. Further, Alternative 4 is cost effective compared to Alternative 2 as it offers a much higher degree of protectiveness and permanence.

8) STATE ACCEPTANCE: The State of New Jersey concurs with the preferred alternative described in this Proposed Plan.

9) COMMUNITY ACCEPTANCE: Community acceptance of the preferred alternative will be evaluated after the public comment period ends and will be described in the Record of Decision for the site.

SUMMARY OF THE PREFERRED ALTERNATIVE:

The preferred alternative for remediation of asbestos contamination at the New Vernon Road and White Bridge Road Sites is Alternative 4, solidification/stabilization. This remedy will treat asbestos containing material with detected levels of asbestos greater than 0.5% (approximately 37,100 cubic yards). The asbestos will be immobilized in an insoluble matrix. Accordingly, this treatment will significantly reduce the risks posed by airborne asbestos at the sites. In addition, after solidification, the sites will be appropriately graded and soil will be placed over the solidified material. Institutional controls will restrict future subsurface activities and will assure the integrity of the treated waste.

Stabilization/Solidification will provide a high degree of long-term effectiveness and permanence, will reduce the mobility of asbestos waste, and is implementable in comparison with other alternatives evaluated. The preferred alternative is cost effective compared to the other alternatives evaluate.

The preferred alternative presents the best balance with respect to the evaluation criteria and will meet the statutory requirements of CERCLA Section 121(b): 1) to protect human health and the environment; 2) to comply with ARARs; and 3) to be cost-effective. The preferred alternative utilizes permanent solutions and alternative technologies to the maximum extent practicable and satisfies the statutory preference for treatment as a principal element.

EPA, in consultation with NJDEP, may modify the preferred alternative or select another response action presented in the Proposed Plan and the FS Report based on new information or public comments. Therefore, the public is encouraged to review and comment on **all** the alternatives explained here.

Mailing List Additions

If you or someone you know would like to be placed on the Asbestos Dump Site mailing list, please fill out and mail this form to:

Patricia Seppi
Community Relations Coordinator
U.S. Environmental Protection Agency, Region II
Office of External Programs
26 Federal Plaza, Room 905
New York, New York 10278
(212) 264-9369

Name: _____

Address: _____

Affiliation: _____ Phone: _____

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION II
26 FEDERAL PLAZA
NEW YORK, NEW YORK 10278
Forwarding and Address Correction Requested

Region II
Office of External Programs
26 Federal Plaza, Room 905
New York, NY 10278

Official Business
Penalty for Private Use
$300

First Class Mail
Postage and Fees Paid
EPA
Permit No. G-35

ABD 001 1770 L

Inside: Asbestos Dump Superfund Site Proposed Plan